



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,081	05/31/2001	Dae-Sik Oh	1639	9317
28005	7590	08/12/2005	EXAMINER	
SPRINT 6391 SPRINT PARKWAY KSOPHT0101-Z2100 OVERLAND PARK, KS 66251-2100			DEAN, RAYMOND S	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/871,081	<b>Applicant(s)</b> OH, DAE-SIK	
	<b>Examiner</b> Raymond S. Dean	<b>Art Unit</b> 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 3, 6 - 20, 24 - 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 7 - 20, 24 - 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see amendment filed June 16, 2005 with respect to the rejection(s) of claim(s) 1 – 3 and 6 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art Sunay et al. (5,940,743), hereafter Sunay. A new grounds of rejection is also made in view of a further search of Steer.

Steer teaches a network component or point such as a base station or base station controller that selects a power level of a primary communication channel for a communication from the mobile station to the base station based on the location of the mobile station (See Column 1 lines 11 – 13, Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25). Steer also teaches starting at the initial power level engaging in a power control process that regulates the power of the primary communication channel used for communication from the mobile station to the base station (Column 1 lines 41 – 51, Column 11 lines 48 – 50, Column 12 lines 4 – 7, this is a closed loop power control method which regulates the power of the mobile, said power control loop, though limited, exists in the system of Steer).

Steer does not teach a base station selecting an initial power level.

Sunay teaches a base station selecting an initial power level (See Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the initial power level taught by Sunay in the system of Steer for the purpose of controlling the transmission power of the mobile station during handoff of a call between base stations thereby reducing the potential for dropped calls or the occurrences of near-far problems during handoff between base stations of different size cells as taught by Sunay.

2. Applicant's arguments filed June 16, 2005 have been fully considered but they are not persuasive. Examiner agrees with Applicants assertion that Soliman teaches upper and lower limits of the reverse link power control loops. The reverse link power control loop, which is a closed loop, also maintains a particular SNR value, which is the target or set point, between the minimum and maximum levels. Soliman therefore teaches a reverse link set point (See Column 1 lines 28 – 45, Column 2 lines 40 – 57, Column 3 lines 19 – 28).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2684

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 3, 6, 24, and 26 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer (6,845,246) in view of Sunay et al. (5,940,743).

Regarding Claim 1, Steer teaches a method of controlling power used for communications between a mobile station and a base station, the method comprising: determining a location of the mobile station (Column 4 lines 63 – 67, Column 5 lines 1 – 3); based on the location, the base station selecting a power level of a primary communication channel for communication from the mobile station to the base station (Column 1 lines 11 – 13, Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25); and starting at an initial power level, engaging in a power control process that regulates the power of the primary communication channel used for communication from the mobile station to the base station (Column 1 lines 41 – 51, Column 11 lines 48 – 50, Column 12 lines 4 – 7, this is a closed loop power control method which regulates the power of the mobile, said power control loop, though limited, exists in the system of Steer).

Steer does not teach a base station selecting an initial power level.

Sunay teaches a base station selecting an initial power level (Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the initial power level taught by Sunay in the system of Steer

Art Unit: 2684

for the purpose of controlling the transmission power of the mobile station during handoff of a call between base stations thereby reducing the potential for dropped calls or the occurrences of near-far problems during handoff between base stations of different size cells as taught by Sunay.

Regarding Claim 2, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 1. Steer further teaches the base station referring to a database that correlates locations with power levels; and the base station selecting from the database a power level that is correlated with the location (Column 3 lines 8 – 27, Column 7 lines 16 – 27, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25, the base station is a network component or point).

Regarding Claim 3, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 2. Sunay further teaches the base station sending to the mobile station an instruction to transmit at the selected initial power level, whereby the mobile station responsively transmits at the selected initial power level (Column 5 lines 20 – 40).

Regarding Claim 6, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 1. Steer further teaches a base station (Column 9 lines 13 – 15).

Regarding Claim 24, Steer teaches a power control system comprising: a database that correlates locations with power levels (Column 3 lines 8 – 29); and a base station controller (BSC) with access to said database, the BSC being configured so that when a mobile station is going to engage in a call, the BSC determines a location of the mobile station, selects from the database a power level based on the location of the mobile station (Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57,

Art Unit: 2684

lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25, the base station controller is a network component or point).

Steer does not teach initial power levels and instructing the mobile station to transmit at the initial power level.

Sunay teaches initial power levels and instructing the mobile station to transmit at the initial power level (Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the initial power level taught by Sunay in the system of Steer for the purpose of controlling the transmission power of the mobile station during handoff of a call between base stations thereby reducing the potential for dropped calls or the occurrences of near-far problems during handoff between base stations of different size cells as taught by Sunay.

Regarding Claim 26, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 1. Steer further teaches the base station determining the location of the mobile station when the mobile station is going to engage in a call (Column 3 lines 8 – 29, Column 6 lines 22 – 28, Column 7 lines 25 – 27, the base station is a network component, point, or part).

Regarding Claim 27, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 26. Steer further teaches the base station detecting a changed location of the mobile station; and in response to detecting the changed location, the base

Art Unit: 2684

station interrupting the power control process (Column 6 lines 22 – 28, Column 7 lines 1 – 19, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25, the closed loop power control process will be interrupted so that a new initial power level based on the new location can be determined).

Regarding Claim 28, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 27. Steer further teaches based on the change location, the base station selecting a new power level (Column 1 lines 11 – 13, Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25); and starting at a new initial power level, engaging in a new power control process that regulates the power of the primary communication channel used for communication from the mobile station to the base station (Column 1 lines 41 – 51, Column 11 lines 48 – 50, Column 12 lines 4 – 7, this is a closed loop power control method which regulates the power of the mobile, said power control loop, though limited, exists in the system of Steer). Sunay further teaches a base station selecting a new initial power level (Column 5 lines 20 – 40).

5. Claims 7 – 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whang et al. (US 6,609,008) in view of Soliman (US 6,490,460).

Regarding Claim 7, Whang teaches a method of controlling power of communications between a mobile station and a base station, the method comprising: based on the location, selecting an initial transmit power for the mobile station on the primary communication channel (Column 9 lines 64 – 67, Column 10 lines 1 – 9, lines



Art Unit: 2684

14 – 16, when the mobile is close to/ far from the base station the S/I will be high/low, said mobile sets the initial transmit power based on said S/I, said S/I is dependent on the distance of said mobile from said base station and thus is dependent on the location of said mobile); and using a reverse link set point and the initial transmit power as a basis to manage mobile station transmit power on the primary communication channel (Column 10 lines 16 – 18, lines 21 – 25).

Whang does not teach determining a location of the mobile station and selecting a reverse link set point based on the location.

Soliman teaches determining a location of the mobile station and selecting a reverse link set point based on the location (Figure 2, Column 4 Table 1, Column 1 lines 28 – 45, Column 2 lines 40 – 57, Column 3 lines 19 – 28, Column 4 lines 12 – 15, lines 63 – 67, Column 7 lines 11 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the location determination method and reverse link set point selection method taught by Soliman in the system of Whang for the purpose of providing a power control system that would dynamically adjust the parameters of the reverse link control loop in response to changing position and/or speed of a mobile station, so as to conserve transmit power and increase cell capacity as taught by Soliman.

Regarding Claim 8, Whang in view of Soliman teaches all of the claimed limitations recited in Claim 7. Soliman further teaches referring to a database that correlates locations with reverse link set points; and selecting from the database a

reverse link set point that is correlated with the location (Figure 2, Column 4 Table 1, Column 7 lines 11 – 29).

Regarding Claim 13, Whang in view of Soliman teaches all of the claimed limitations recited in Claim 7. Soliman further teaches a base station (Figure 4, Column 8 lines 17 – 20).

6. Claims 9 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable Whang et al. (US 6,609,008) in view of Soliman (US 6,490,460) as applied to Claim 7 above, and further in view of Chen et al. (US 6,763,244)

Regarding Claim 9, Whang in view of Soliman teaches all of the claimed limitations recited in Claim 7. Whang further teaches sending the mobile station an instruction to use the initial transmit power (Column 10 lines 14 – 16, in open loop power control there are access attempts which comprise transmitting a message and receiving or failing to receive an acknowledgement for said message, when an acknowledgement is received from the base station the mobile will then set the initial transmit level and transmit at said level, the acknowledgement gives the mobile the “green light” to go ahead and transmit at the established initial power level thus said acknowledgement is the instruction).

Whang in view of Soliman does not teach measuring an energy level of a signal received from the mobile station; based on the energy level and an estimate of air interface noise,  $N_0$ , computing a measured value of  $E_b/N_0$ ; comparing a measured value of  $E_b/N_0$  with the reverse link set point and if the measured value of  $E_b/N_0$  does

Art Unit: 2684

not match the reverse link set point, sending to the mobile station an instruction to adjust the mobile station transmit power on the primary communication channel.

Chen teaches measuring an energy level of a signal received from the mobile station; based on the energy level and an estimate of air interface noise,  $N_0$ , computing a measured value of  $E_b/N_0$  (Column 4 lines 65 – 67, Column 5 lines 12 – 21); comparing a measured value of  $E_b/N_0$  with the reverse link set point and if the measured value of  $E_b/N_0$  does not match the reverse link set point, sending to the mobile station an instruction to adjust the mobile station transmit power on the primary communication channel (Column 4 lines 65 – 67, Column 5 lines 12 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the power control method taught by Chen in the wireless system of Whang in view of Soliman for the purpose of maximizing reverse link capacity as taught by Chen.

Regarding Claim 10, Whang in view of Soliman teaches all of the claimed limitations recited in Claim 7. Whang further teaches receiving a signal at the base station from the mobile station (Column 10 lines 16 – 18, during closed loop power control the base station will receive a signal from the mobile station such that said base station can measure the signal quality of the reverse link).

Whang in view of Soliman does not teach measuring a frame error rate of the signal; comparing the measured frame error rate to a threshold frame error rate; if the measured frame error rate does not match the threshold frame error rate, adjusting the

Art Unit: 2684

reverse link set point; using the adjusted reverse link set point as a basis to manage mobile station transmit power on the primary communication channel.

Chen teaches measuring a frame error rate of the signal; comparing the measured frame error rate to a threshold frame error rate (Column 4 lines 65 – 67, Column 5 lines 40 – 67); if the measured frame error rate does not match the threshold frame error rate, adjusting the reverse link set point (Column 4 lines 65 – 67, Column 5 lines 40 – 67); using the adjusted reverse link set point as a basis to manage mobile station transmit power on the primary communication channel (Column 4 lines 65 – 67, Column 5 lines 40 – 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the outer loop method taught by Chen in the wireless system of Whang in view of Soliman for the purpose of maintaining a desired link performance thus reducing delays in serving users as taught by Chen.

Regarding Claim 11, Whang in view of Soliman and in further view of Chen teaches all of the claimed limitations recited in Claim 10. Soliman further teaches based on the location, selecting a bounding value for a reverse link set point; using the bounding value as a basis to limit the reverse link set point (Figure 2, Column 7 lines 11 – 29, the SNR ranges provide the bounds).

Regarding Claim 12, Whang in view of Soliman and in further view of Chen teaches all of the claimed limitations recited in Claim 11. Soliman further teaches wherein selecting a bounding value for a reverse link set point comprises: referring to a database that correlates locations with bounding values of reverse link set points; and

selecting from the database a reverse link set point that is correlated with the location (Figure 2, Column 7 lines 11 – 29).

7. Claims 14 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,763,244) in view of Steer (US 6,845,246) and in further view of Soliman (US 6,490,460).

Regarding Claim 14, Chen teaches performing a first process comprising establishing a measured value of  $E_b/N_0$  and if the measured value of  $E_b/N_0$  does not match the reverse link set point instructing the mobile station to adjust transmit power on the primary communication channel (Column 4 lines 65 – 67, Column 5 lines 12 – 21); performing a second process comprising establishing a measured value of reverse link frame-error-rate and if the measured value of reverse link frame-error-rate does not match a threshold value of reverse link frame-error-rate, adjusting the reverse link set point (Column 4 lines 65 – 67, Column 5 lines 40 – 67); and performing a third process comprising receiving a measured value of forward link frame-error-rate and if the received value of forward link frame-error-rate does not match a threshold value of forward link frame-error-rate, adjusting the forward link transmit power on the primary communication channel (Column 5 lines 40 – 67).

Chen does not teach a location based power control method for communications between a mobile station and a base station, the method comprising: determining a location of the mobile station; and based on the location, selecting from a database values of initial mobile station transmit power, reverse link set point, and initial base

Art Unit: 2684

station transmit power for a primary communication channel, instructing the mobile station to transmit at the initial mobile station transmit power on the primary communication channel; transmitting to the mobile station at the initial base station transmit power on the primary communication channel.

Steer teaches a location based power control method for communications between a mobile station and a base station, the method comprising: determining a location of the mobile station (Column 4 lines 63 – 67, Column 5 lines 1 – 3); and based on the location, selecting from a database values of initial mobile station transmit power (Column 3 lines 8 – 27, Column 7 lines 16 – 24, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25) and initial base station transmit power for a primary communication channel (Column 9 lines 13 – 57), instructing the mobile station to transmit at the initial mobile station transmit power on the primary communication channel (Column 8 lines 6 – 10, the fact that the mobile will transmit uplink signals means that there will be a point in time when said mobile will be instructed to transmit said signals); transmitting to the mobile station at the initial base station transmit power on the primary communication channel (Column 9 lines 13 – 16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the location determination method and initial power selection based on said location method taught by Steer in the wireless system of Chen for the purpose of preventing the power control feedback loop from correcting for deep fades thereby substantially eliminating system degradation as taught by Steer.

Chen in view of Steer does not teach based on location, selecting from a database values of reverse link set point.

Soliman teaches based on location, selecting from a database values of reverse link set point (Figure 2, Column 4 Table 1, Column 1 lines 28 – 45, Column 2 lines 40 – 57, Column 3 lines 19 – 28, Column 7 lines 11 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reverse link set point selection based on location method in the wireless system of Chen in view of Steer for the purpose of adjusting the parameters of the reverse link power control loop in response to changing position and/or speed of a mobile station thereby conserving transmit power and increasing cell capacity as taught by Soliman.

Regarding Claim 15, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 14. Soliman further teaches a base station (Figure 4, Column 8 lines 17 – 20).

Regarding 16, Chen teaches a method of controlling power of communications between a mobile station and a base station, the method comprising the following steps: computing an energy-to-noise measure for a signal received from the mobile station (Column 4 lines 65 – 67, Column 5 lines 12 – 21); determining if the energy-to-noise measure matches the set point (Column 4 lines 65 – 67, Column 5 lines 12 – 21); and in response to a determination that the energy-to-noise measure does not match the initial set point, instructing the mobile station to adjust the mobile station transmit power (Column 4 lines 65 – 67, Column 5 lines 12 – 21).

Chen does not teach determining a location of the mobile station; based on the location, selecting a set point and a mobile station transmit power on a primary communication channel; instructing the mobile station to transmit at the mobile station transmit power on the primary communication channel.

Steer teaches determining a location of the mobile station (Column 4 lines 63 – 67, Column 5 lines 1 – 3); based on the location, selecting a mobile station transmit power on a primary communication channel (Column 3 lines 8 – 27, Column 7 lines 16 – 24, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25); instructing the mobile station to transmit at the mobile station transmit power on the primary communication channel (Column 8 lines 6 – 10, the fact that the mobile will transmit uplink signals means that there will be a point in time when said mobile will be instructed to transmit said signals).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the location determination method and power selection based on said location method taught by Steer in the wireless system of Chen for the purpose of preventing the power control feedback loop from correcting for deep fades thereby substantially eliminating system degradation as taught by Steer.

Chen in view of Steer does not teach based on location, selecting a set point.

Soliman teaches based on location, selecting a set point (Figure 2, Column 4 Table 1, Column 1 lines 28 – 45, Column 2 lines 40 – 57, Column 3 lines 19 – 28, Column 7 lines 11 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reverse link set point selection based on location method



Art Unit: 2684

in the wireless system of Chen in view of Steer for the purpose of adjusting the parameters of the reverse link power control loop in response to changing position and/or speed of a mobile station thereby conserving transmit power and increasing cell capacity as taught by Soliman.

Regarding Claim 17, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 16. Chen further teaches monitoring an error rate of signals received from the mobile station (Column 4 lines 65 – 67, Column 5 lines 40 – 67); determining if the error rate matches a predetermined threshold; in response to a determination that the error rate does not match the predetermined threshold, adjusting the set point (Column 4 lines 65 – 67, Column 5 lines 40 – 67).

Regarding Claim 18, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 17. Chen further teaches periodically repeating the steps of d – f and g – i steps (Column 4 lines 65 – 67, Column 5 lines 12 – 67).

Regarding Claim 19, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 18. Steer further teaches detecting a new location of the mobile station (Column 4 lines 63 – 67, Column 5 lines 1 – 3), repeating steps b – c (Column 3 lines 8 – 27, Column 7 lines 16 – 24, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25). Soliman further teaches based on location, selecting a set point (Figure 2, Column 4 Table 1, Column 1 lines 28 – 45, Column 2

Art Unit: 2684

lines 40 – 57, Column 3 lines 19 – 28, Column 7 lines 11 – 29). Chen further teaches repeating steps d – f (Column 4 lines 65 – 67, Column 5 lines 12 – 21).

Regarding Claim 20, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 16. Soliman further teaches a base station (Figure 4, Column 8 lines 17 – 20).

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steer (6,845,246) in view of Sunay et al. (5,940,743) as applied to Claim 24 above, and further in view of Amirijoo et al. (US 6,603,976).

Regarding Claim 25, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 24. Steer in view of Sunay does not teach a mobile positioning center (MPC), wherein the BSC queries the MPC to determine the location of the mobile station.

Amirijoo teaches a mobile positioning center (MPC), wherein the BSC queries the MPC to determine the location of the mobile station (Column 3 lines 26 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the MPC taught by Amirijoo in the system of Steer in view of Sunay as an alternative means of determining the location of the mobile stations.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2684

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

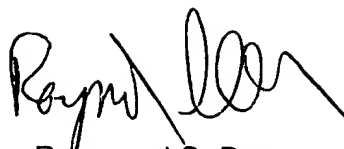
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus. Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005. After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".

**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

Application/Control Number: 09/871,081  
Art Unit: 2684

Page 20



Raymond S. Dean  
July 26, 2005

EDAN ORGAD  
PATENT EXAMINER/TELECOMM.

E.O. 8/1/05